UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
1735 BALTIMORE
KANSAS CITY, MISSOURI 64108

Big River Mines
MC 0781216879
17.8
Pine Ford Proj.
10-28-76

October 28, 1976

Colonel Leon F. McKinney
District Engineer
Corps of Engineers
St. Louis District
210 North 12th Street
St. Louis, Missouri 63101

Dear Colonel McKinney:

This is in response to your letter of October 12, 1976, regarding the need for reservoir storage for water quality control in the Pine Ford Lake project in the Meramec River Basin.

Section 102(b) of the Federal Water Pollution Control Act Amendments of 1972 states that "... consideration shall be given to inclusion of storage for regulation of streamflow, except that any such storage and water releases shall not be provided as a substitute for adequate treatment or other methods of controlling waste at the source." This section of the Act is not specific as to its applicability to point or non-point sources or as to its applicability to low flow or high flow conditions. Nevertheless, formal EPA policy on this matter quite clearly addresses both point and non-point sources and both low and high flow conditions. A copy of the EPA policy is enclosed. The thrust of the EPA policy is as follows:

1. Reservoir storage or flow regulation shall not be used as a substitute for providing adequate waste treatment or other method of control at the source (i.e. first prevent pollutants from point and non-point sources from entering water courses).

2. Inclusion of storage for water quality control by flow regulation is allowable only where such storage is required as a supplement to the application of adequate waste treatment at the source and is in consonance with water quality management plans developed under the Federal Water Pollution Control Act.

Addressing specific points in your letter, reservoir storage allocations for stream flow augmentation shall not be used as a substitute for treatment of both point and non-point sources of pollution. Reservoir storage allocation with stream flow augmentation is an acceptable method of reducing the effects of non-point source pollution, but only as required to supplement best management practices for direct non-point source pollutant control in order to achieve stream water quality standards. Flow augmentation in no way provides for the reduction of downstream pollutants which is the basis of the water pollution control program envisioned by the Act. Flow augmentation will reduce the concentration of downstream pollutants, but will not however reduce the mass of downstream pollutants in the receiving water. The effectiveness and practicality of flow augmentation for dilution under high flow conditions appears questionable, in addition to being an incompatible-type of multipurpose use with flood control. In accordance with Section 208 of the Act, the Missouri Department of Natural Resources and East-West Gateway Coordinating Council are in the process of developing Water Quality Management Plans which will assess non-point source pollution in the Meramec basin. We suggest any effort on your part to explore or quantify non-point sources of pollution be directed at assisting these two planning efforts.

Our letter did not intend to indicate that water quality is, and will continue to be a problem along the lower Meramec. The wasteload allocation study completed in October 1974, determined that stream water quality standards would be maintained under low flow conditions (seven day, ten year low flow) with construction of a regional wastewater treatment facility discharging to the Mississippi River. With implementation of this proposed point source control scheme, non-point source loads affecting low-flow (i.e. background loads) are not anticipated to cause a water quality standards violation. Thus, flow augmentation for low-flow conditions is determined to be unnecessary.

High flow conditions will be studied by current 208 planning efforts. The need for flow augmentation for high flow conditions will be determined after completion of these studies. High flow-augmentation would be justifiable only if direct non-point source control practices were determined to be insufficent to meet stream water quality standards, and then only to supplement such non-point source controls.

The last part of your letter discusses the use of a reservoir as a non-point source treatment mechanism. EPA policy dictates that this shall not be used as a substitute for direct source controls (i.e. first prevent pollutants from point and non-point sources from entering water courses). Enclosed are two EPA funded studies of lake sediments and their chemical characteristics.

We hope this letter adequately discusses EPA policy regarding flow augmentation, so that you may complete your pre-construction planning for Pine Ford Lake.

Sincerely yours,

Jerome H. Svore
Regional Adminstrator

Enclosure

cc: Department of Natural Resources
East-West Gateway Coordinating Council